

# U.S. FISH AND WILDLIFE SERVICE INTERNATIONAL AFFAIRS

## ZOONOTIC SPILLOVER: SOURCES AND SAFEGUARDS



Zoonotic diseases are those that spread between animals (wild and domestic) and humans. About 60% of known infectious diseases and 75% of new or emerging infectious diseases originate in animals.

Certain interactions between animals and humans can increase the risk for zoonotic diseases to spread from animals to humans (spillover). Conversely, certain practices and safeguards can reduce the risk for transmission and safeguard the animal and human health.

### SOURCES



#### Unregulated & illegal trade =

- bypassing disease checks and quarantine requirements
- poor conditions increase animals' stress, risk for infection, and pathogen shedding

#### Unsanitary market conditions =

- increased contact with animal bodily fluids & improperly cooked or stored animal products

#### Habitat loss and deforestation =

- loss of food and shelter resources
- stressed wildlife & increased pathogen shedding (release)
- greater contact with humans

#### Livestock-wildlife interaction =

- increased risk for cross-species transmission
- compromised wildlife & livestock health
- increased risk for livestock to transmit pathogens to humans

These risky human-wildlife interactions **increase the likelihood of spillover**



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### SAFEGUARDS

#### Market best practices =

- sanitary handling and storage of animal products (refrigeration, gloves)

#### Regulated trade & combating wildlife trafficking =

- shipments are screened for diseases
- encourages safe transport conditions, protecting both animals & humans



The International Affairs program supports these safeguards through efforts to:

- protect healthy wildlife populations and their habitats,
- combat wildlife trafficking,
- regulate international wildlife trade, &
- promote wildlife-friendly livestock operations.

#### Biosecurity measures & wildlife-friendly livestock operations =

- enclosing livestock away from wildlife
- vaccinating livestock
- reduced risk for cross-species transmission

#### Intact habitats & healthy wildlife populations =

- ecosystems that are resilient to disease and disturbances
- reduced human-wildlife interaction